REMARKS

In accordance with the foregoing, claim 1 has been amended, and claim 26 has been added.

Claims 1-3 and 6-26 are pending and under consideration.

ENTRY OF AMENDMENT UNDER 37 C.F.R. §1.116:

Applicants request entry of this Rule 116 Response because:

(1) the amendment to claim 1 and addition of claim 26 should not entail any further search by the Examiner since no new features are being added or no new issues are being raised; and

(2) the amendments do not significantly alter the scope of the claims and place the application at least into a better form for purposes of appeal. No new features or new issues are being raised.

The Manual of Patent Examining Procedures sets forth in Section 714.12 that "any amendment that would place the case either in condition for allowance or in better form for appeal may be entered." Moreover, Section 714.13 sets forth that "the Proposed Amendment should be given sufficient consideration to determine whether the claims are in condition for allowance and/or whether the issues on appeal are simplified." The Manual of Patent Examining Procedures further articulates that the reason for any non-entry should be explained expressly in the Advisory Action.

REJECTIONS UNDER 35 U.S.C. §102:

In the Office Action at pages 2-3, the Examiner rejects claim 1, 7, and 8 under 35 U.S.C. §102 in view of Maeda et al. (U.S. Patent No. 5,144,601). This rejection is respectfully traversed and reconsideration is requested.

By way of review, Maeda et al. suggests using a laser to heat domains and magnetically imparting information in the heated domain on a magneto-optical memory medium. As such, Maeda et al. does not suggest optically recording the data. However, even assuming arguendo Maeda et al. teaches optically recording data, Maeda et al. discloses that the data is magnetically written after the laser heats a writable domain using a continuous write beam W and erases previous marks using the laser to heat the erase domain according to a pulse erase beam E. As shown in FIG. 3D and 4D, the pattern for the pulsed erase beam E begins and ends at a low power and does not end with the high power. Therefore, it is respectfully

submitted that Maeda et al. does not disclose or suggest, among other features, "causing a power level of a pulse between an end of the erase pattern and a start point of the recording pattern to be the high level of the multi-pulse and a power level of a leading pulse of the erase pattern to be the low level or the high level of the multi-pulse" as recited in claim 1.

Additionally, the Examiner asserts on page 3 that the low pulse of Maeda et al. corresponds to a cooling pulse which is below the leading and trailing pulses of claim 7. However, it is respectfully submitted that since the leading and trailing pulses of the pulsed erase beam E are at the low pulse, the low pulse relied upon by the Examiner as showing a cooling pulse does not have a lower power than the leading low pulse. As such, it is respectfully submitted that Maeda et al. does not disclose or suggest, among other features, "causing a power level of a leading pulse of the erase pattern to be a same level of the multi-pulse as a power level of a trailing pulse of the multi-pulse and is above a cooling level of the recording and/or erase pattern" as recited in claim 7.

Claim 8 is deemed patentable due at least to its depending from claim 1.

REJECTIONS UNDER 35 U.S.C. §103:

In the Office Action at page 4, the Examiner rejects claim 3 under 35 U.S.C. §103(a) over Maeda et al. in view of Clark et al. (U.S. 5,802,031). The rejection is respectfully traversed and reconsideration is requested.

Even assuming arguendo that the Examiner's characterization of Clark et al. is correct, the Examiner does not rely upon Clark et al. as curing the above-noted deficiency of Maeda et al. as applied to claim 1, from which claim 3 depends. As such, it is respectfully submitted that the combination does not suggest the features of claim 3.

In the Office Action at page 4-10, the Examiner rejects claims 1, 2, 6, 8-12, 15, 16, and 22-25 under 35 U.S.C. §103 in view of Ichihara (U.S. Patent No. 6,396,792). The rejection is respectfully traversed and reconsideration is requested.

On pages 5-7 and 13 of the Office Action, the Examiner acknowledges that Ichihara does not suggest an erase pattern in which a leading pulse is a low power level, or a trailing pulse is of a high power level. However, the Examiner asserts that such a modification would have been obvious since Ichihara suggests using other power levels lower than the recording level Pa, and especially since Ichihara suggests in col. 11, lines 16-25 that one needs to consider the properties of the recording layer and the laser in order to determine the appropriate level.

Even assuming arguendo Ichihara suggests using other power levels as asserted by the Examiner, Ichihara does not suggest using an erase pattern with a different pattern as opposed to power levels for the same pattern. Thus, Ichihara does not suggest a high power trailing pulse or low power lead and trailing pulses.

As is evident from FIGs. 3 and 4 as explained in cols. 8 - 9, the multiple pulses having the disclosed pattern are used to more accurately form erasures. As shown, when initiating an erasure, Ichihara suggests alternating between high and low pulse powers Pc1, Pc2 in order to alternately promote crystallization growth and nuclei formation. Ichihara teaches that the alternating powers Pc1, Pc2 are due to the different temperatures at which crystals grow and nuclei are generated as shown in FIG. 3. By starting off with a high pulse Pc1 during the initial period Tc1 as shown in FIG. 4, nuclei are formed and then grown in order to ensure an accurate beginning to the erasure. Moreover, by ending at the low pulse Pc2, the erasure ends more accurately without extending into the adjacent mark. As such, this pattern is consistent with the desired temperature profile C shown in FIG. 4. As set forth in col. 9, lines 25-31, this pattern as shown in FIG. 1B is used in order "to ensure the effects of the present invention." Therefore, assuming arguendo that different levels for Pc1 and Pc2 can be used, Ichihara does not suggest changing the pattern such that the first pulse should be at a low power level Pc2 (thereby delaying the initiation of the erasure pattern) or that the last pulse be at a high power level Pc1 (thereby extending the erasure pattern into the adjacent mark). As such, Ichihara does not suggest and instead teaches away from using the invention as recited in claims 1, 6, and 24.

Additionally, the Examiner asserts on pages 9 and 11 of the Office Action that Ichihara teaches that Ichihara teaches the features of claims 18, 19, 22, and 23 since the power of Pc1 can be Pa, which is the first pulse of the recording pattern as set forth on page 11. By way of review and as a point of clarification, while not labeled in FIG. 1B or specifically discussed in the specification, a first one of the recording pulses has a level which is below the power level Pc1 (and appears to be Pc), and increases into a second pulse having a level of Pa. As such, the power level of the first recording pulse is shown as less than the first pulse of the erase signal having the power level Pc1.

Further, as shown in FIG. 4, where the Pc power level was used in the pulse as using the erase pattern of FIG. 1C, there was a delay in the erasure mark start as shown by profile B that leads to the failure to erase problem shown in FIG. 1E. As such, Ichihara teaches away from using the same Pc power level for the first erasure pulse as it is too low a power to start the erasure.

Therefore, even assuming different power levels can be used for Pc1 and can be up to Pa, it is respectfully submitted Ichihara does not suggest and teaches away from using the first pulse of the recording pattern. Thus, Ichihara does not suggest, among other features, "a first one of the multi-pulses of the recording pattern having a power that is greater than or equal to a power of leading pulse of the erase pattern" as recited in claim 22, and similarly does not suggest the invention of claims 23.

As a general matter, in order to establish a prima facie obviousness rejection, the Examiner needs to provide both the existence of individual elements corresponding to the recited limitations, and a motivation to combine the individual elements in order to create the recited invention. Both the individual elements and the motivation need to be shown to have existed in the prior art. Should the Examiner fail to provide evidence that either one of the individual elements or the motivation does not exist in the prior art, then the Examiner has not provided sufficient evidence to maintain a prima facie obviousness rejection of the claim. MPEP 2143.03. Thus, the burden is initially on the Examiner to provide evidence as to why one of ordinary skill in the art would have been motivated to combine the individual elements to create the recited invention, and to demonstrate that this evidence existed in the prior art. MPEP 2143.01.

As an example, MPEP 2143.01 refers to In re Kotzab, 55 USPQ2d 1313 (Fed. Cir. 2000). In In re Kotzab, the Federal Circuit agreed with the Patent Office and the Examiner that the prior art, as a whole, disclosed each of the individual elements of the recited invention, which was an injection molding machine. However, the Federal Circuit held that "a rejection [for obviousness] cannot be predicated on the mere identification in [one of the prior art references] of individual components of the claimed limitations." Instead, the Federal Circuit held that "particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." Id. at 1317. As such, in order to establish a prima facie obviousness rejection of a claim, the Examiner needs to both provide this particular evidence of the motivation to make the combination, and show that this evidence existed in the prior art. MPEP 2143.01. Such documentation is required in order provide evidence of record. C.f. In re Zurko, 59 USPQ2d 1693 (Fed. Cir. 2001) (no evidence in the prior art disclosing that the combination would have been "basic knowledge" or "common sense," and that the Board "must point to concrete evidence in the record to support these findings.") It is respectfully submitted that, even assuming arguendo that Ichihara suggests using other power levels for the shown pulse in FIG. 1B, Ichihara does not suggest altering the overall erasure pattern shown in FIG. 1B such that there remains insufficient evidence as to why

one skilled in the art would alter the pattern shown in FIG. 1B of Ichihara in a manner required to meet the features of the recited invention.

As such, it is respectfully requested that the Examiner reconsider and withdraw the rejection of claims 1, 2, 6, 8-12, 15, 16, and 22-25 under 35 U.S.C. §103 under Ichihara.

On pages 10-11, the Examiner rejects claims 17-19 and 21 under 35 U.S.C. §103(a) over Ichihara in view of Ushiyama et al. (U.S. Patent Publication No. 2002/0176338). The rejection is traversed and reconsideration is respectfully requested.

On page 10 of the Office Action, the Examiner relies upon Ichihara as disclosing an erase pattern with a space formed by erase pulses, but admits that Ichihara does not suggest a first one of the recording pulses being altered according to a property of a last one of the erase pulses. However, the Examiner relies upon Ushiyama et al. as teaching using a first recording pulse optimized according to the property of a space in front of the recording pattern as described in paragraph 0049.

By way of review, Ushiyama et al. teaches determining optimum first and last recording pulse widths in response to a length of the resulting space before/after the recording mark. As shown in FIG. 7, the optimized width for each pattern 1, 2 of space and mark is where the jitter is at a minimum. However, other than using the entire space width to determine an optimal pulse width for the specific pattern, Ushiyama et al. does not suggest that components of the space should be used.

Further, while Ichihara teaches forming erasures of specific lengths using multiple pulses, there is no suggestion that the widths of the individual pulses in the erase pattern are affected by the change in erasure length as opposed to reducing or increasing the number of pulses used to create the appropriate erasure length. Thus, the properties of the pulses themselves are independent of erasure length and no single pulse width is deemed crucial as asserted by the Examiner on page 11. As such, even assuming arguendo that the combination is proper, the combination teaches adjusting a width of the pulses of Ushiyama et al. according to an overall erasure length for an erasure created using the pulses having levels Pc1, Pc2 of Ichihara, where the pulses have constant properties regardless of the erasure length. Thus, neither Ushiyama et al. nor Ichihara disclose or suggest, among other features, "adjusting a first pulse of the another multi-pulse according to a property of the trailing pulse" as recited in claim 17.

Additionally, while the Examiner relies upon Ichihara as disclosing the features of claim 18, for at least reasons set forth above in relation to the rejection of claim 23, it is respectfully

submitted that Ichihara does not disclose or suggest, among other features, "the power of the leading pulse of the erase pattern is equal to the power of the first one of the multi-pulses of the recording pattern" as recited in claim 18. Since Ushiyama et al. is not relied upon as disclosing such a feature, it is respectfully submitted that the combination further does not disclose the features of claim 18.

Claims 19 and 21 are deemed patentable due at least to the patentability of claim 17.

In the Office Action at page 12, the Examiner rejects claim 20 under 35 U.S.C. §103 in view of Ichihara and Tanaka et al. (U.S. Patent No. 5,825,742). The rejection is respectfully traversed and reconsideration is requested.

Even assuming arguendo that the Examiner's characterization of Tanaka et al. is correct, the Examiner does not rely upon Tanaka et al. as curing the above-noted deficiency of Ichihara as applied to claim 17 and further does not assert that either Tanaka et al. or Ichihara discloses all of the features of claim 17 without Ushiyama et al. Since claim 20 depends from claim 17, it is respectfully submitted that the combination with or without Ushiyama et al. does not suggest the features of claim 20.

STATUS OF CLAIMS NOT REJECTED IN OFFICE ACTION

On page 12 of the Office Action, the Examiner objects to claims 13 and 14 as depending from rejected base claims.

PATENTABILITY OF NEW CLAIMS:

Claim 26 is deemed patentable due at least to reasons similar to why claim 1 is deemed patentable.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Response, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

STEIN, MCEWEN & BUI, LLP

By: _____
James G. McEwen
Registration No. 41,983

1400 Eye St., N.W.
Suite 300
Washington, D.C. 20005
Telephone: (202) 216-9505
Facsimile: (202) 216-9510

Date: May 15, 2006